Figure 1

$$-\!\left(\!CH_2CH\!=\!CHCH_2\!\right)_{\!x}\!\left(\!CH_2CH\!-\!CHCH_2\!\right)_{\!y}\!\left(\!CH_2CH\!=\!CHCH_2\!\right)_{\!z}\!-$$

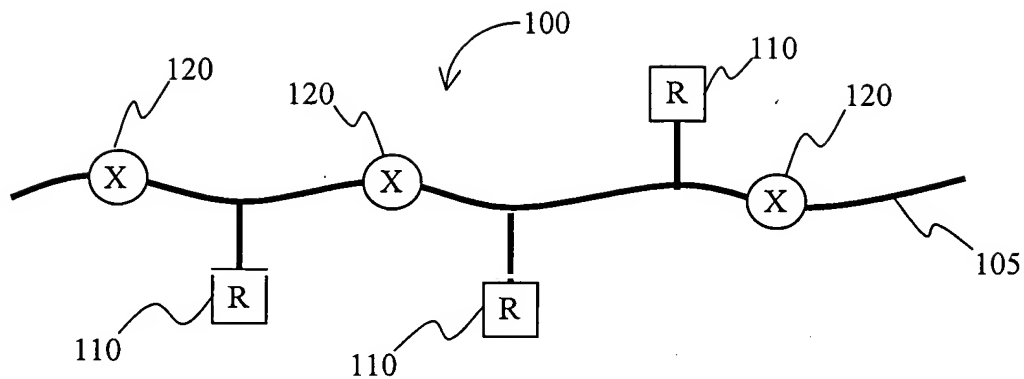$$\underset{HOOC}{\overset{|}{CH}}\!-\!\underset{COO(CH_2CH_2O)_nCH_3}{\overset{|}{CH}}$$
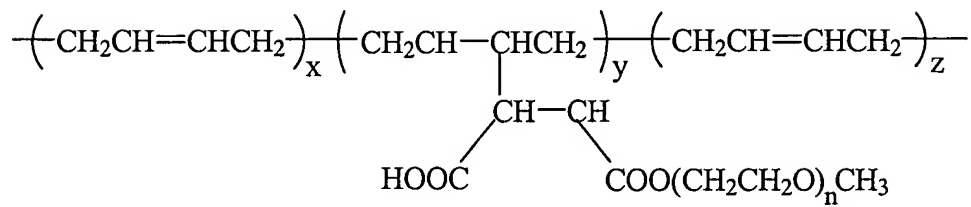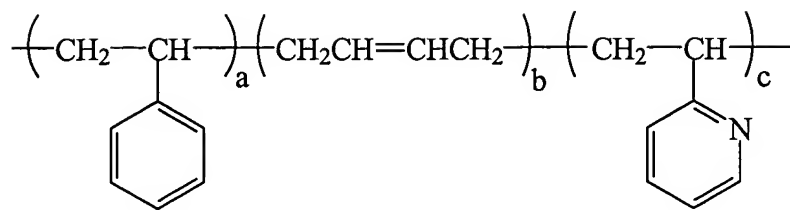
x , y , z = any integer number and x+y+z < 20,000
n= integer number between 1 and 100

Figure 2

a, b, c = any integer number

Figure 3

Figure 4
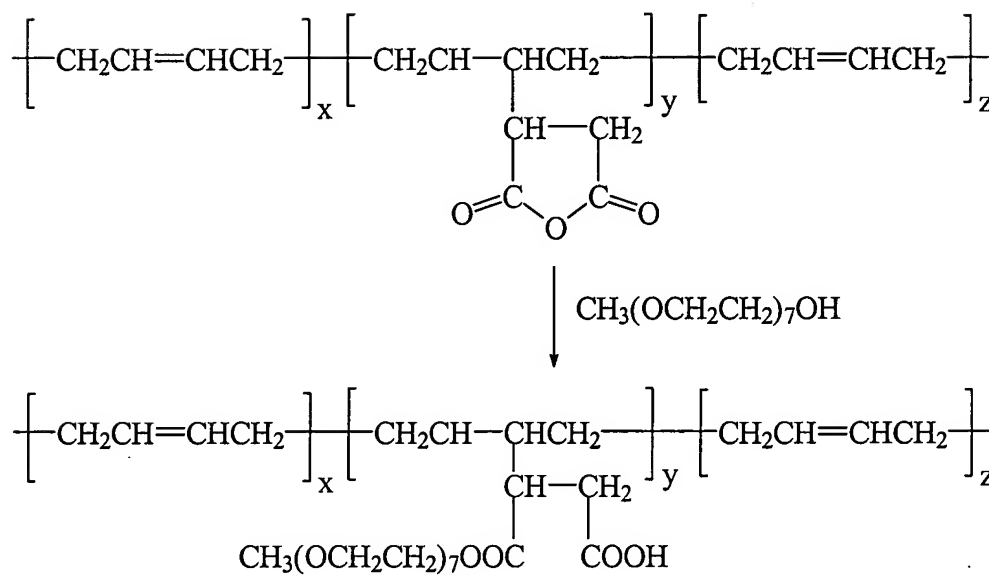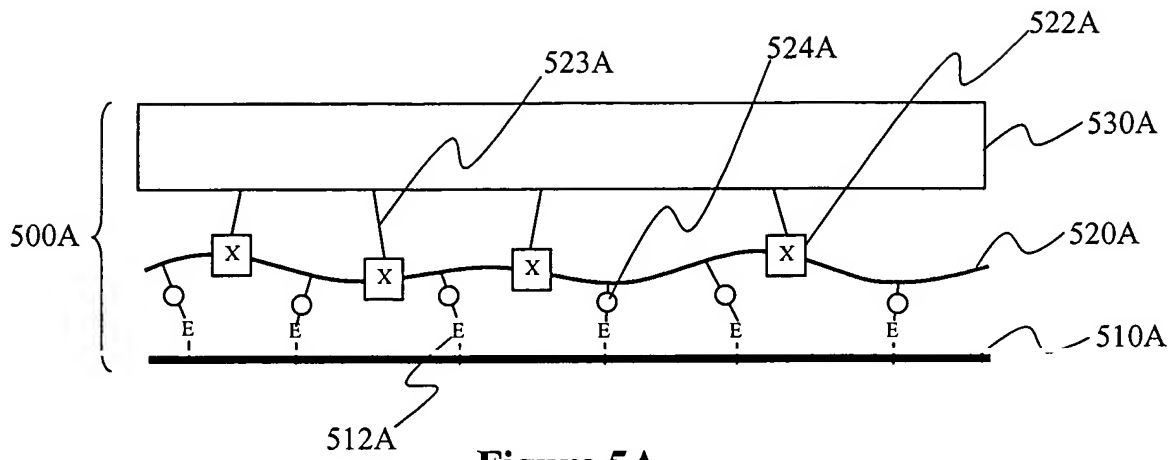
523A   524A   522A

530A

500A

520A

510A

512A

Figure 5A

542B   541B   523B

530B

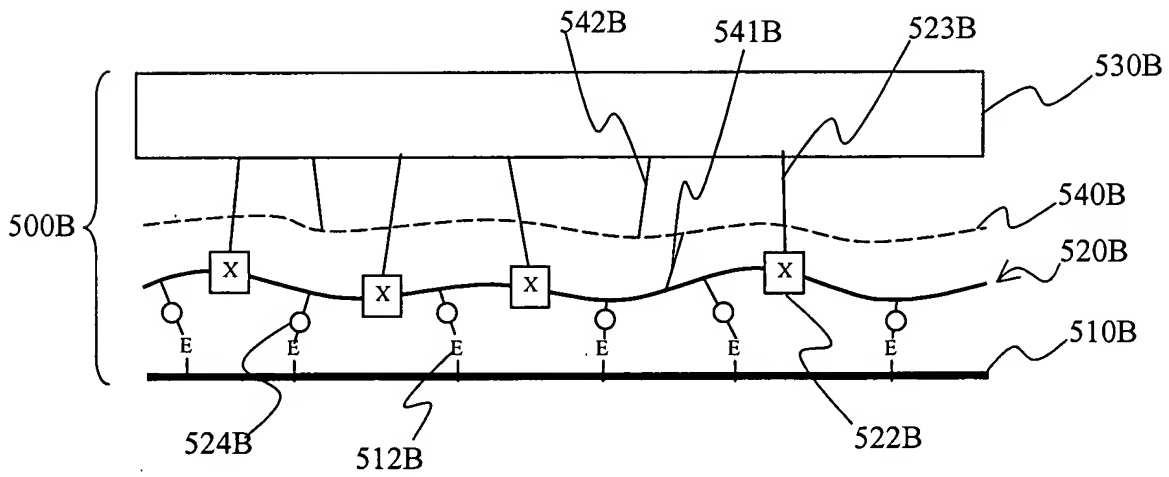500B

540B

520B

510B

524B   512B   522B

Figure 5B

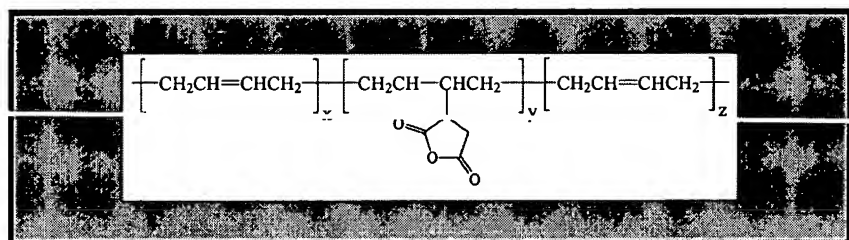| Rubber |
| --- |
| (1) Natural rubber + Any synthetic rubber + Accelerators + Sulfur and other standard rubber additives (2) Maleinized Polybutadiene (or maleinized unsaturated polymer) |

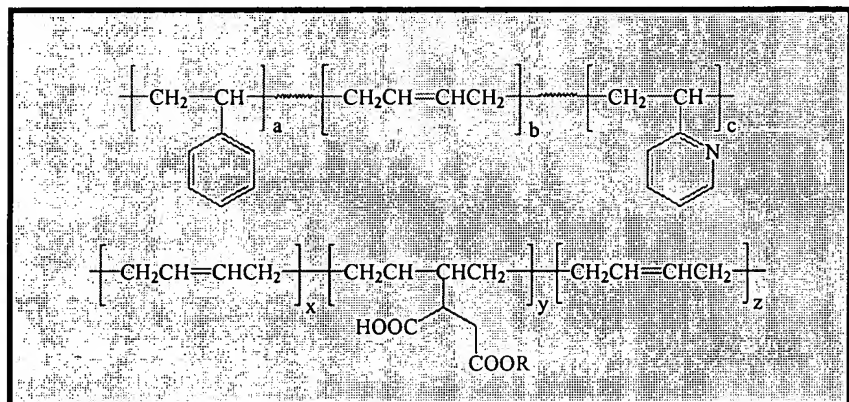| Water dispersible coating contains a mixture of: (1) an acid modified polybutadiene and (2) a Styrene-butadiene-Vinyl pyridine Latex |
| --- |

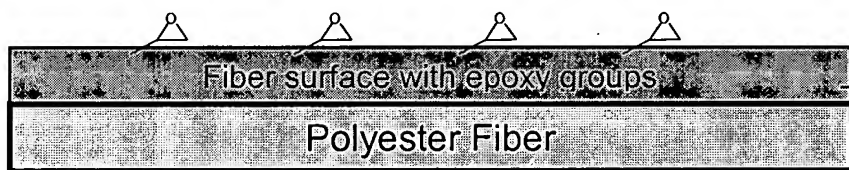| Fiber surface containing Epoxy groups |
| --- |

Polyester Fiber

Figure 6A

Rubber modified with 1-10 wt% Maleinized

Water based Coating containing
(1) Styrene-Butadiene-Vinyl pyridine Latex and
(2) Acid Modified Polybutadiene

Polyester Fiber with epoxy groups

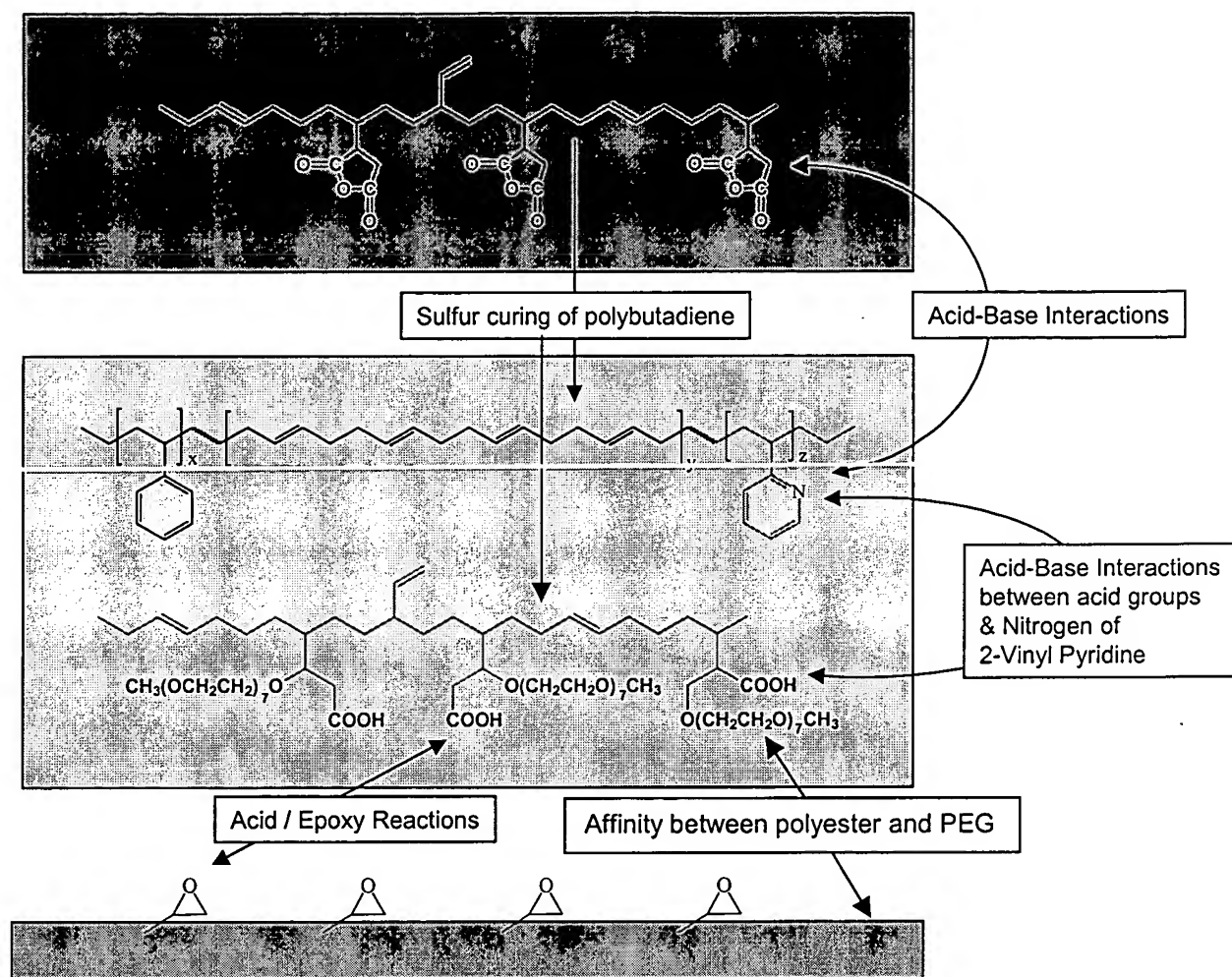Fiber surface with epoxy groups

Polyester Fiber

Figure 6B

Figure 7